

**What is claimed is:**

1. A method for monitoring updates to a software repository, comprising:
  - assembling a baseline snapshot of a baseline version of a software interface, said baseline version obtained over a network from a software repository via an application programming interface;
  - storing the baseline snapshot;
  - assembling an updated snapshot of an updated version of the software interface, said updated version obtained over the network from the software repository via the application programming interface;
  - comparing the updated snapshot to the baseline snapshot to detect at least one difference between the updated version and the baseline version;
  - rating each detected difference according to a backward compatibility metric;
  - determining an overall backward compatibility of the updated version based on the difference ratings; and
  - issuing an alert message containing the overall backward compatibility.
2. The method of claim 1, wherein the alert message is issued only when the overall backward compatibility indicates the updated version is not backward compatible.
3. The method of claim 1, wherein the compatibility metric comprises a table of software modifications including backward-compatible software modifications and backward-incompatible software modifications.
4. The method of claim 3, wherein the backward-incompatible software modifications include:
  - deleting a parameter from a subroutine; and
  - deleting a field from a public data structure.
5. The method of claim 3, wherein the backward-incompatible software modifications include:
  - adding a mandatory parameter to a subroutine; and
  - adding a mandatory field to a public data structure.

6. The method of claim 3, wherein the backward-incompatible software modifications include:
  - redefining an optional parameter as a mandatory parameter;
  - changing a parameter data type; and
  - changing a public field data type.
7. A method for monitoring software updates, comprising:
  - detecting at least one difference between a baseline version of a software object and an updated version of the software object;
  - rating each detected difference according to a backward compatibility metric;
  - determining an overall backward compatibility of the updated version based on the detected difference ratings;
  - issuing an alert message including the overall backward compatibility.
8. The method of claim 7, wherein the alert message includes a summary of each detected difference.
9. The method of claim 7, wherein the detecting comprises discovering that a parameter in the baseline version is missing from the updated version.
10. The method of claim 7, wherein the detecting comprises discovering that a parameter is optional in the baseline version, but the parameter is mandatory in the updated version.
11. The method of claim 7, wherein the detecting comprises discovering that a parameter in the baseline version is defined as a different data type in the updated version.
12. A method for monitoring updates to a software object repository, comprising:
  - detecting at least one difference between a baseline version of an object interface and an updated version of the object interface; and
  - issuing an alert when at least one of the detected differences indicates the updated version is not backward compatible.

13. The method of claim 12, wherein the object interface comprises a list of components published by a software object residing in the object repository, said components including object properties and object methods.
14. A method for comparing software interfaces, comprising:
  - taking a first snapshot of a first software interface;
  - detecting at least one difference between the first snapshot and a second snapshot of a second software interface; and
  - issuing an alert when at least one of the detected differences indicates the first software interface is not backward compatible with respect to the second software interface.
15. The method of claim 14, further comprising:
  - rating each detected difference according to a predetermined difference metric;
  - determining an overall difference between the first software interface and the second software interface based on the difference ratings; and
  - incorporating the overall difference into the alert message.
16. The method of claim 14, further comprising:
  - assigning a user to the first snapshot; and
  - issuing the alert message to the user.
17. The method of claim 14, further comprising:
  - incorporating a summary of each detected difference into the alert message.
18. The method of claim 14, wherein a snapshot comprises a table having at least one record, said record including at least one attribute.
19. The method of claim 18, wherein said record describes an object property.
20. The method of claim 19, wherein said attribute indicates a data type of the object property.
21. The method of claim 19, wherein said attribute indicates a data length of the object property.
22. The method of claim 18, wherein said record describes an object method.

23. The method of claim 18, wherein said record describes an object method parameter.
24. The method of claim 23, wherein said attribute indicates a data type of the object method parameter.
25. A computer programmed to monitor versions of a software interface, comprising:
- means to assemble a baseline snapshot of a baseline version of a software interface;
  - means to store the baseline snapshot;
  - means to assemble an updated snapshot of an updated version of the software interface;
  - means to compare the updated snapshot to the stored baseline snapshot to detect at least one difference between the updated version and the baseline version;
  - means to determine an overall backward compatibility of the updated version based on the detected differences; and
  - means to issue an alert message containing the overall backward compatibility.
26. The computer of claim 25, further comprising:
- means to rate each detected difference according to a backward compatibility metric.
27. The computer of claim 26, further comprising:
- means to incorporate the ratings and the detected differences into the alert message.
28. A machine-readable medium having stored thereon a plurality of instructions for monitoring a software interface, the plurality of instructions comprising instructions to:
- take a first snapshot of a first software interface;
  - detect at least one difference between the first snapshot a second snapshot of a second software interface;
  - rate each detected difference according to a backward compatibility metric;
  - determine an overall backward compatibility of the first software interface with respect to the second software interface, based on the difference ratings; and

issue an alert message including the overall backward compatibility.

29. A computing apparatus programmed to execute the plurality of instructions stored on the machine-readable medium of claim 28 in response to an external trigger.

30. The computing apparatus of claim 29 wherein the external trigger comprises a received notification of an update to the second software interface.

31. The computing apparatus of claim 29 wherein the external trigger comprises a received notification of a scheduled event.

32. A computer system, including:  
a processor coupled to a network;  
an electronic file storage device coupled to the processor; and  
a main memory coupled to the processor, the main memory containing a plurality of executable instructions to implement a method for monitoring software interfaces, the method comprising:  
accessing a first software interface stored on a network server;  
taking a first snapshot of the first software interface;  
storing the first snapshot on the electronic file storage device;  
accessing a second software interface stored on the network server;  
taking a second snapshot of a second software interface;  
detecting at least one difference between the first snapshot and the second snapshot;  
rating each detected difference according to a predetermined difference metric;  
determining an overall difference between the first software interface and the second software interface based on the difference ratings; and  
issuing an alert when the overall difference indicates the first software interface is not backward compatible with respect to the second software interface.